

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form ([see an example](#)) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below. Some articles will have been accepted based in part or entirely on reviews undertaken for other BMJ Group journals. These will be reproduced where possible.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Framework of policy recommendations for implementation of evidence-based practice: a systematic scoping review
<b>AUTHORS</b>	Ubbink, Dirk; Guyatt, Gordon; Vermeulen, Hester

### VERSION 1 - REVIEW

<b>REVIEWER</b>	Elizabeth D Pienaar SeniorScientist South African Cochrane Cetnre South African Medical Research Council South Africa  No competing interests to declare
<b>REVIEW RETURNED</b>	23-Oct-2012

<b>THE STUDY</b>	In order for the literature search to comprehensive I would liked th authors to have also searched EMBASE even though it overlaps with MEDLINE it would have ensured that nothing is missed.
<b>GENERAL COMMENTS</b>	This is a very important study which highlights an important issue for all healthcare practitioners world-wide.

<b>REVIEWER</b>	Duncan Chambers Research Fellow, TRiP-LaB CRD University of York York YO10 5DD, UK
<b>REVIEW RETURNED</b>	30-Oct-2012

<b>THE STUDY</b>	Standard of English is generally acceptable given that the first author is not a native speaker.
<b>GENERAL COMMENTS</b>	Major comments  Title: The title does not accurately describe the content of the paper. Based on the title I expected a systematic review of the effectiveness of policy interventions to implement EBP. In fact the paper is a purely descriptive compilation of attitudes/knowledge, barriers/facilitators and interventions that have been suggested (not necessarily evaluated) to support EBP. The title should be changed to reflect the actual content and should include the phrase 'a systematic scoping review' because that is essentially what it is.  Inclusion criteria and literature search: You don't specify in the inclusion criteria that you are only interested in studies in hospitals and similar settings but the search strategy given might fail to

	<p>capture studies from general practice and other primary care settings. Could you clarify this?</p> <p>Tables 4 and 5: These present very limited information and are not helpful. I suggest they should either be revised to show how many and which studies the data were derived from or removed.</p> <p>Discussion, page 10 lines 27–29: I don't think this should be described as an 'evidence-based policy framework of recommendations' because as far as I can tell it is not based on evidence but on expert opinion. A phrase like 'framework of policy recommendations for implementation of EBP' would be appropriate. The same applies wherever similar language is used in the paper.</p> <p>Minor comments</p> <p>General: Overall the standard of written English is good. I have highlighted a few issues below and I would suggest the native English speaker among the authors should check the text before resubmission if appropriate.</p> <p>Abstract, page 2 line 20: 'searched' not 'sought'</p> <p>Page 4 lines 25–45: This whole paragraph is rather vague. The 'purpose' mentioned in line 32 is not clearly defined and I am unsure what 'is yet burgeoning' (line 38) means; perhaps 'is still developing'? Please add references for McColl and Funk (line 32).</p> <p>Page 4 line 49: managers are mentioned here but not in the stated inclusion criteria. Please clarify.</p> <p>Data extraction: page 6 line 3 states that two researchers independently extracted data but further down (line 16) you report that extracted data were checked by a second investigator. Please clarify.</p> <p>Page 7 line 3: I think this should be 31 studies?</p> <p>Page 7 line 9: I suggest rephrasing to something like 'most studies used the questionnaires developed by McColl...'</p> <p>Page 7 line 7: 'All studies applied postal or electronic questionnaires' but line 27 mentions interviews. Please clarify.</p> <p>Page 8 lines 44–57: Again it is unclear which studies are providing the results discussed here.</p> <p>Page 21 Table 2: What does +- (+ on top of -) mean? Does it mean robustness was unclear?</p>
<b>REVIEWER</b>	<p>Beth Shaw Senior Technical Adviser National Institute for Health and Clinical Excellence United Kingdom</p>
<b>REVIEW RETURNED</b>	09-Nov-2012
<b>THE STUDY</b>	Q1 Research question - The paper states that "Based on these findings, many different recommendations for improvement have

	<p>been proposed. Hence, it is timely to synthesise these recommendations for more structural organisational initiatives that may help overcome barriers and facilitate the uptake of EBP." The question then outlined does not seem to address this as surveys of perceptions about EBP are summarised - and although recommendations for improvement are collected from these - there may be recommendations from other sources that are of value. It may be clearer to state in the introduction section that surveys of healthcare professionals' views of EBP has led to suggestions on how to improve its use, and the aim is to summarise these.</p> <p>Q3 Review methods - the use of Medline and Cochrane alone is likely to have missed relevant surveys. Also the search strategy looks very minimal, so it would be interesting to know if information specialist advice or input was sought?</p>
<b>RESULTS &amp; CONCLUSIONS</b>	<p>Q4 Conclusion - this is a report of views and suggested ways to improve uptake - however, the discussion and conclusions are presented more as a review of the effect of the recommended interventions. This could be very misleading... For example, the use of computer facilities at the point of care may be thought of as being a 'good idea' (as suggested in this review) but it should be shown in evaluation studies that it is effective - this is a whole other review!</p>
<b>GENERAL COMMENTS</b>	<p>This is a very interesting review - however there are some major concerns both in the methods used and the conclusions drawn. The results are of interest, but I think over-stated based on the methods used.</p>

### VERSION 1 – AUTHOR RESPONSE

Reply to Elizabeth Pienaar

Thank you for your positive reception of our study.

We admit we did not search EMBASE. To accommodate the reviewer, we have added an EMBASE search during the same period and found 34 additional hits, of which 4 were potentially eligible for inclusion. Unfortunately, these papers were all in Chinese, so we could not add them. This is now described on pages 6 and 7. Besides, since our last search, some studies have appeared that would also be relevant to our review. However, these additional surveys are not likely to substantially change the findings and quintessence of our review.

Reply to Duncan Chambers

Thank you for your detailed judgment and valuable remarks on our manuscript.

Major comments:

\* Title: We have reconsidered the title of our manuscript and have changed it to meet the suggestions made by two reviewers.

\* Inclusion criteria and literature search: In the Abstract, Introduction and Methods sections we specified our focus to be on 'clinical doctors and nurses'. Apparently, this does not clearly comprise the hospital or similar settings. A recent review already addressed the barriers towards the use of EBP among general practitioners (Zwolsman S et al, Br J Gen Pract 2012). Hence, we have extended the description of our inclusion criteria on page 5 to show our focus.

\* Tables 4 and 5: Table 4 presents a qualitative list of the top 10 of most mentioned barriers, based on the publications that mention these. Because of the different presentations in the various papers, it is impossible to quantify this information, but it does show the most common difficulties perceived. We

prefer to retain this table, but leave it to the discretion of the Editor whether it should be removed. We have removed table 5, but have summarised this information in the text on page 9.

\* Discussion: We agree the evidence we obtained in this review is based on the reported perceptions of the professionals addressed in the questionnaires. Thus, the expert opinion we could amass from the literature was best available evidence to formulate our policy recommendations. We have changed the title and instances in the text to accommodate the reviewer's concern.

Minor comments:

Along with your suggestions we have corrected the language and clarity issues.

We added the references to McColl and Funk.

We have added the managers to the inclusion criteria.

Two investigators (DU & HV) independently extracted data, while the data entry was performed by one investigator (DU) and checked by another (HV). We have clarified this in the text on page 6.

We rephrased the uncertainties on pages 7 and 8.

The results about awareness were derived from the studies that addressed this item. This is shown in Table 1, right column: eight studies that studied awareness (aspect 3) contributed to these results.

We have now explained this in the text.

Table 2: "±" means a "fair" robustness, which was the case in four of the included studies that reported some validation effort. Studies that mentioned pilot testing, previous validation and a Cronbach's alpha to underpin the robustness of the questionnaire they had used were indicated by a "+". Studies who did not report anything on this scored a "-". We have now recoded the robustness in Table 2 for more clarity, showing a "+" for fair robustness and "++" for good robustness.

Reply to Beth Shaw

Thank you very much for your valuable feedback and appreciation of our manuscript.

Q1: We agree with you that we may have missed some studies that address organisational initiatives to implement EBP. We preferred the sources as described in our manuscript to make sure they relate their recommendations to their findings about perceptions of clinicians regarding EBP. However, we do agree with your reasoning, so we have adjusted the text in the Introduction section according to your suggestion.

(Q2 is not stated)

Q3: Initially, we had indeed limited ourselves to these two databases. To accommodate the reviewer, we reran our search in EMBASE with the aid of a clinical librarian and found 34 additional hits, of which 4 were potentially eligible for inclusion. Unfortunately, these papers were all in Chinese, so we could not add them. This is now described on pages 6 and 7. Besides, since our last search some recent studies have appeared that would also be relevant to our review. However, these few additional surveys are not likely to change our findings and conclusion substantially.

The text of the manuscript offers a mere summary of our search strategy used. In reality the 'exploded' search strategy covers several pages.

Q4: We agree with you that the policy framework we presented is an extrapolation of the suggestions made based on the professionals' views on EBP. Hence, it seems like a needs assessment among professionals in daily clinical practice to get EBP going. A logical next step should indeed be to validate the effectiveness of the perceived needs, which is beyond the scope of this review and is addressed by only very few studies. Their effectiveness, therefore, is yet unproven, as we already stated in the Discussion on page 12, line 21-25.

The message we tried to convey here is that, based on the suggestions from care professionals, improvement of the uptake of EBP should entail strategic, tactic, as well as operational interventions

at an organisational or even a national level. We did indeed discuss some available evidence on the effectiveness of some of the suggested interventions, just to corroborate the idea of a multilevel implementation strategy. We have rephrased instances in the Discussion section where we might inadvertently have given the impression that we reviewed the effects of the suggested interventions.

## VERSION 2 – REVIEW

<b>REVIEWER</b>	Duncan Chambers Research Fellow, TRiP-LaB CRD, University of York, York YO10 5DD, UK
<b>REVIEW RETURNED</b>	10-Dec-2012

<b>GENERAL COMMENTS</b>	<p>My comments on the previous draft have largely been addressed. I have only a few minor comments:</p> <p>Title: change 'EBP' to 'evidence-based practice'</p> <p>Page 11 line 7: 'reported' might be more precise than 'encountered'?</p> <p>Page 12 line 2: change 'have shown' to 'have been shown'</p> <p>Table 4: You say you 'merged' your results with data from another systematic review to produce table 4. It would be helpful to clarify which barriers were not identified by studies included in the current review.</p> <p>I am happy to leave these suggestions to the discretion of the authors and do not need to see the manuscript again.</p>
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<b>REVIEWER</b>	Beth Shaw Senior Technical Adviser National Institute for Health and Clinical Excellence UK
<b>REVIEW RETURNED</b>	19-Dec-2012

<b>THE STUDY</b>	<p>Patients - I have interpreted this to mean health care professionals. So a minor point is that undergraduate surveys have been excluded but there are recommendations on improving the teaching of EBP in curricula. This could be justified in that you are exploring the views of professionals applying EBP in the 'real world' so their view on undergraduate/teaching curricula is valid, whilst the views of undergraduates who do not have this experience, while interesting, will not contribute to answering your review question... So more an observation than a criticism!</p> <p>Stats methods - not relevant, but the thematic process was fine.</p>
<b>RESULTS &amp; CONCLUSIONS</b>	<p>Message - is there any value in adding that this review could stimulate the testing of some of these recommendations through appropriately designed studies?</p>
<b>GENERAL COMMENTS</b>	<p>Many thanks for your consideration of my previous comments. I found this interesting to read and addressed my concerns in the draft.</p>

## **VERSION 2 – AUTHOR RESPONSE**

Comments to Reviewer 1 (dr. Chambers):

We have written out 'EBP' in the title and have changed the wording as suggested on pages 11 and 12.

The Kajermo review only addressed barriers perceived by nurses, while ours addressed barriers reported by both doctors and nurses. Hence, the Kaleremo review and ours are largely complementary and it does not seem helpful to discern the differences, but rather to give a synthesis of the barriers.

Comments to Reviewer 2 (dr. Shaw):

That's right. We excluded undergraduate surveys as undergraduates have not yet applied the principles of EBP in real clinical practice to render first-hand information, while the opinion of active clinical professionals appears more valid.

Message: Thank you for your suggestion to add that "this review could stimulate the testing of some of these recommendations through appropriately designed studies". We have added this to the discussion section.